Periscope.

DEUTSCHE ZEITSCHRIFT FUER NERVENHEILKUNDE

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1. Disturbances of Motion in Complete Anesthesia of an Arm as a Result of Stab-Wound of the Spinal Cord, with Remarks upon the Doctrine of Coördination and Ataxia. A. Strümpell.
2. Epilepsy. M. Biro.
3. The Relation of Some Reflexes in Healthy Persons and in Tabes, with Remarks upon the Early Diagnosis of Tabes. J. Kollarits.
4. Contribution to the Knowledge of Myasthenia Gravis, with the Discovery of Cellular Foci in Numerous Muscles. R. Link.
5. Innervation of the Cucullaris Muscle. Schulz.
6. Paralyses in Epidemic Cerebrospinal Meningitis. J. Schmid.
7. Chorea Mollis Sive Paralytica with Changes in the Muscles. W. Rindfleisch.
8. Clinical and Statistical Data upon the Symptomatology of Tabes. Tabes among the Working Classes. A. v. Sarbó.
9. Experimental Investigations upon the Relation of the Patellar Reflexes in Higher Transverse Myelitis. A Postscript to the Article on Acute Cerebral and Cerebrospinal Ataxia, in Volume 22 of this Journal. R. Bàlint.

1. *Disturbances of Motion and Anesthesia.*—A man of twenty-seven years, in a quarrel, was repeatedly stabbed in the back, fell to the ground, and remained paralyzed. Two large wounds were found in the back to the right and left of the second and third spinus processes. With great effort the patient was able to move both legs and the right arm slightly, but the left arm remained completely paralyzed. In a short time motion was restored to both legs and to the right arm. There was loss of sensation in the right side of the body from a level one inch below the clavicle downward. Pressure, pain and temperature sense were only disturbed in the right arm and right side of the trunk as far as the groin. There was normal sensation on the whole left side of the body including the left arm. Passive movement was not felt in the right arm. The tendon reflexes were only preserved in the right leg. The skin reflexes were normal. The muscles reacted normally to electricity. In the course of time motion returned to all the limbs, but the right arm remained anesthetic and there was distinct ataxia. Strümpell believes that the lesion was in the left posterior cornua and posterior columns of the cervical cord. He describes carefully the alterations in the movement that occurred, the effect upon the movements of closing the eyes, which caused them to be extremely uncertain, and the fact that the patient was practically unable to use the hand. He discusses the relation of anesthesia to ataxia, speaks particularly of the development of higher manifestations of movement in human beings, and concludes that we have certain elements in the production of normal movements: first, the centripetal transmission of the regulating sensations to the central nervous system; second, the proper utilization of these sensations by the central nervous system, and finally, the intact centrifugal transmission along the motor paths. Moreover, voluntary motion is not controlled merely by this simple reception of sensations and emission of impulses, but

also by the education of the central nervous system through numerous sensations receiving impulses transmitted in the past.

2. *Epilepsy.*—Biro has studied 306 cases of epilepsy with particular relation to the following points: (1) The etiology with reference to physical and psychical injuries, reflex conditions, the relations of infectious diseases to disturbances of metabolism, to alcoholism and to heredity; (2) the preliminary conditions of the disease and the relations of some little-known prodromes to the nature and severity of the attack; (3) the reciprocal relations of various symptoms, such as disturbances of the bladder and biting of the tongue during the attack, to other phenomena; (4) the condition of biting of the tongue in relation to the pupils; (5) some remarkable post-epileptic manifestations which are commonly called epilepsia procursiva; (6) the psychical condition of the patient. In regard to the age, the disease commenced in 60 per cent before the twenty-first year. In 48 per cent of the cases it was possible to find some cause of the disease, and in 21 per cent of these there was a history of injury. In some of these, the epilepsy occurred very promptly, in others after comparatively long intervals. Sometimes there was only a single injury; in others it was frequently repeated. In 10 per cent of the cases some psychical injury had occurred. In one per cent of the patients there was a history of onanism. Twenty-six of the patients developed epilepsy after the thirtieth year; only one of these had had syphilis. In no case was there hereditary syphilis. In 185 cases carefully studied there were no heart lesions. In only one of all the cases was there any symptom of slight aortic stenosis. Intestinal parasites were found in one per cent of the cases, but cure very rarely occurred after their expulsion. Alcoholism appeared to have slight influence upon the production of epilepsy. Alcoholism in the parents, however, was present in 14 per cent of the cases, and as nearly all the cases belonged to the Jewish race, and as the Jews are as a class temperate, this represents a very large proportion. In 6 per cent of the cases there was direct heredity, and in 16 per cent either direct or collateral heredity. In 24 per cent there was neuro- or psychopathic heredity. It appears that sons are more apt to inherit epilepsy from their father, daughters from their mother. The prodromes are classified as follows. Sensory in 30 per cent; vasomotor in 22 per cent; psychical in 17 per cent; visceral in 16 per cent. In 28 per cent there was a distinct aura. Biro observed no cases in which Argyll-Robertson pupils were present. Vomiting occurred in 2 per cent of the cases. In 14 per cent there was biting of the tongue. In 5 cases there was incontinence of the feces during the attack. Disturbance of urination occurred no matter whether the disease commenced early or later in life. The time of occurrence or duration of the disease appears to have no distinct influence upon the severity of the attacks. The post-epileptic symptoms were usually constant and occurred after every attack. They consisted of fatigue, sleepiness, weakness of the extremities, headache, and vomiting. The sleepiness occurred in 60 per cent of the cases. In 4 per cent of the cases albuminuria was present. The time of occurrence was in 58 per cent during the day or night; in 5 per cent only during the day; in 8 per cent very frequently during the day; and in 29 per cent only during the night. In 14 per cent of the cases there was distinct intellectual deterioration. This did not appear to bear any particular relation to the duration of the disease. In only 2 per cent of the cases was there any change in the type of the attacks. Sometimes the attacks were distinctly periodic. Biro discusses the diagnosis, pathogenesis, and pathological anatomy, chiefly upon the basis of his literary studies. The prognosis is difficult. It is always worse when the attacks are severe in the beginning. A great variety of procedures have been recognized in the treatment: the

rest-cure; various operations upon the vertebral arteries, the cervical ganglia, trephining, and lumbar puncture, but the results are invariably uncertain. Among the drugs that have been given are atropine and the bromides, which should be given in diminishing doses, but which may be combined with various other drugs or with the withdrawal of chlorides from the food, under which circumstances as soon as symptoms of intoxication develop milk and large quantities of sodium chloride should be given.

3. *Early Diagnosis of Tabes.*—Kollarits has studied 1,000 healthy cases in reference to various reflexes. In every one he found the scapulohumeral reflex present, also the patellar and Achilles tendon reflexes, and the triceps reflex, and therefore he regards the absence of these reflexes as of pathological significance. In 100 cases of tabes the following results were obtained. All four reflexes failed to be present in 31 cases; all four were present in 25; the Achilles tendon reflex was alone absent in 11; the Achilles and patellar reflexes were absent in nine; the Achilles tendon and patellar and triceps reflexes were absent, and the scapulo-periosteal reflex was present in seven cases. In some cases unilateral persistence of the reflexes was observed. The total results were: absence of the Achilles tendon reflex on both sides in 65 cases, on one side in five, present in 30 cases. Absence of the patellar tendon reflex on one side in 56, on one side in four and present in 40 cases. The triceps reflex was absent in 43, one side in 10; the scapulo-periosteal reflex was absent on both sides in 35, and one side in two cases. The greatest importance, therefore, should be placed upon the Achilles tendon reflex. Careful study of the 100 cases indicated that there was no rule in the serial course of the various symptoms of tabes. Among the most important early symptoms are the hypertonia, the paralyses of the eye muscles, disturbances of sensation and the loss of the Achilles tendon reflex. He mentions two cases in which the disease commenced with paralysis of accommodation on the part of the pupils, showing other tabetic symptoms very slowly. In one case the symptoms occurred in a woman twenty-one years of age.

4. *Myasthenia Gravis.*—The patient, a man of forty-three years, had had an attack of pain in the back, limbs and joints. Six years later he had ptosis, and a feeling of heaviness in the legs and then in the arms. Later he had strabismus, diplopia, and the muscles became rapidly paralyzed by exertion. He developed bulbar symptoms and died. During the course of the disease there was a distinct myasthenic reaction in many of the muscles. The most important pathological alterations found were numerous accumulations of round cells in the muscles. This was probably not inflammatory, because there was not fever at any time in the course of the disease. The spleen and lymph glands were not enlarged, and therefore they were not leukemic. Link suggests that this accumulation of cells disturbed the lymphatic circulation, and therefore favored the extraordinary tendency to fatigue on the part of the muscles.

5. *Cucullaris Muscle Innervation.*—A girl of twenty years, after a severe injury to the shoulder, was noticed to have slight deformity due to the high position of the shoulder-blade. The lower portion of the left cucullaris was found to be completely atrophied. The middle bundle was moderately atrophied and the upper bundle very slightly. The position of the scapula was abnormal in spite of the fact that the acromial portion functioned fairly well, and it was distinctly winged. In this case there appeared to be injury to the accessory nerve, and as a result of careful studies of the literature, Schulz concludes that the accessory nerve supplies really the lower portion of the trapezius muscle, partly the middle portion, and the upper portion in association with certain of the accessory

nerves. The cause of the winged position of the scapula is apparently the atrophy of the lower bundle of the trapezius muscle.

6. *Paralysis in Epidemic Cerebrospinal Meningitis.*—A man twenty-one years of age had an attack of cerebrospinal meningitis, meningococci being found in the cerebrospinal fluid. On the seventeenth day of the disease he had recovered but had partial paralysis of the lower arm, abduction being completely impossible. There was atrophy of the deltoid and infraspinatus, and extreme weakness of the pectoral muscles. There were quantitative changes in the electrical reactions, but no reaction of degeneration. There was also in part of the left arm an area of lost touch and pain sense, and diminished temperature sense. Two days later there was an area of complete anesthesia on the right leg just below the insertion of the patellar tendon. The patient gradually recovered both sensation and motion and was discharged capable of working. Schmid believes that the cause of the paralysis was either in the nerves or the spinal cord, and as meningitis was present unquestionably, it was the result of that condition.

7. *Chorea Mollis.*—After collecting seven cases from the literature Rindfleisch reports two cases of chorea mollis that he observed. The first a girl of four years, had had painful swelling and redness of various joints. There was some cardiac involvement and choreic movements. The patient gradually developed weakness of the arms and legs and finally became paralyzed. In the course of six weeks both the paralysis and the choreiform movements had ceased. The second patient, a girl of five years, had fever, pain in the breast, cough and dyspnea. There was also a cardiac lesion. The child gradually developed apathy and finally refused to speak. When examined there was paralytic weakness of all the voluntary muscles, swallowing was difficult, the patient could neither sit, stand nor walk. The electrical reactions of the muscles and sensation were normal. The child died, and at the autopsy there was found an acute varicose endocarditis of the mitral valve, pericarditis, pneumonia, bronchitis, nephritis and enteritis. In the central nervous system there was some enlargement of the pericellular and perivascular spaces, and slight degenerative changes in Nissl's granules. In the muscles many of the fibers were swollen and tortuous, and frequently showed granular degeneration. There was proliferation and deformity of the nuclei; the intracellular nerve fibers were normal, and the interstitial tissue contained numerous nuclei. In conclusion Rindfleisch mentions that the muscles in this patient had an alkaline reaction immediately after death, and that rigor mortis did not develop.

8. *Tabes and Occupation.*—Sarbó has collected the statistics of 1,200 private cases of nervous disease, 4,000 cases among workmen. Among private patients 7.4 per cent had tabes, and among the workmen 2.6 per cent. For various reasons the latter figure represents the normal proportion. In the upper classes 7 per cent of the cases were women; in the lower classes 16 per cent. The age at which occurrence took place was as follows.

UPPER CLASSES.		WORKMEN.	
Age	Per cent.	Age	Per cent.
20—30	7.	20—30	16
30—40	63.5	30—40	48
40—50	24.7	40—50	
50+	4.6	50+	9

That is to say cases occurred more frequently among the workmen in the early and late life than among the upper classes. Syphilis was present in 53.6 per cent of the upper classes, and in 43 per cent of the workmen. This is probably due to the fact that the latter class paid less attention to their symptoms. Among the non-tabetic cases of nervous disease syphilis was present in 5.5 per cent among the workmen. Of the other etiological factors there are neuropathic heredity in 15.3 per cent, alcohol in 7.3 per cent, and thermic influences in 4.1 per cent. Sarbó discusses certain arguments that have been brought forward against the syphilitic nature of tabes, and calls attention to the fact that tertiary syphilis is even rarer than tabes, and that the disease is not especially uncommon among women. In 60 per cent of all cases of tabes, marriage was either unfruitful or there were abortions. The time at which syphilitic infection preceded the development of the symptoms varied from one to thirty years. It varied from six to twenty years in 75 per cent of the cases. The wives of five men suffering from tabes had probable tabes in one case, certain tabes in two cases, tertiary syphilis in one, and cerebral syphilis in one. Two husbands suffering from general paralysis had tabetic wives. Sarbó gives a valuable table of the early symptoms of tabes, the most common being the lancinating pains in 67.5 per cent; next common, diplopia in 3.6 per cent; dyspnea and some disturbance of hearing, ptosis and Argyll-Robertson pupil occurred in 12 per cent. Decoloration and atrophy of the eyegrounds occurred in 71 per cent of the cases during the first five years. He gives another table of the symptoms of the advanced stage of the disease, from which we find that his own sign: analgesia of the peroneus nerve, is present in 85.5 per cent.

9. *Patellar Reflexes in High Transverse Myelitis.*—Bàlint performed five experiments upon rabbits and cats in order to determine the effect upon the reflexes of section of the cord. He found that if he used a thin-bladed knife for the section, the reflexes could be elicited immediately after it was made; if a thicker blade was used the time of their appearance was delayed for several minutes, and when crushing force was employed several days elapsed. In seven cases he extirpated the cerebellum. There was more or less prolonged absence of the reflexes. In one case seven days. The muscles were atonic and if the animal lived the reflexes gradually returned. Unilateral extirpation indicated that the cerebellum influences the muscles on the same side. He noted in these experiments that the corneal reflex disappeared on the same side as the extirpated cerebellar hemisphere. Another series of experiments was also made to determine whether histological changes occurred in the lumbar region after crushing the spinal cord at a higher level, which would explain the disappearance of the reflexes. In four cases there were distinct although not extensive degenerative changes in the large lumbar nerve cells. In three cases there was degeneration in the posterior columns evidently secondary to degeneration of the posterior roots. He concludes that separation of the lumbar cord from the upper cord, particularly the centrifugal tracts of the cerebellum, influences reflex activity unfavorably by diminishing muscle tone. As a result of this even a slight secondary involvement of the reflex tracts is sufficient to cause the reflexes to disappear.

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1. Three New Theories of Hysteria. HENRI COLIN.
2. A Case of Juvenile General Paresis with Microscopical Examination. L. MARCHAND.